REMARKS:

This paper is herewith filed in response to the Examiner's Office Action mailed on September 24, 2007 for the above-captioned U.S. Patent Application. This Office Action is a rejection of claims 1-28 of the application.

More specifically, the Examiner has rejected claims 1-28 under 35 USC 103(a) as being unpatentable over Patel (US6,907,243), in view of Kondo (US5,748,624) and Demjanenko (US2002/0051501); rejected claims 3 and 9 under 35 USC 103(a) over Patel in view of Kondo and Demjanenko and in further view of Raghavan (US20030134607); rejected claim 23 over Patel, in view of Kondo and Demjanenko, and further in view of Raghavan (US2003/0134607); and rejected claim 26 under 35 USC 103(a) as being unpatentable over Patel in view of Kondo and Demjanenko and further in view of Leung (US7,124,193).

The Applicant notes that claims 1, 7, 14, and 18 have been amended for mere formality. Claims 29-31 have been added. Support for the new claims may be found at least on page 6, lines 1-7, and page 11, line 20 to page 12, line 2. No new matter is added.

Regarding the rejection of independent claim 1, the Examiner states in the Office Action that:

> "[Patel discloses] granting system resources to the mobile station based at least in part on a bandwidth requirement of the mobile station, wherein for a mobile station having a high bandwidth requirement, the mobile station is preferentially granted system resources, as compared to another mobile station having a lower bandwidth requirement (See Figure 11 — mobile 580 with low bandwidth requirements has less preference than the high bandwidth mobiles 560 and 570"

The Applicants respectfully submit that Patel fails to read on the relevant elements of claim 1 against which it is cited.

Claim 1 recites:

> "A method for granting system access to mobile stations, comprising: receiving a

> call admission request from a mobile station at the edge of a cell; and granting system resources to the mobile station based at least in part on a bandwidth requirement of the mobile station, wherein for a mobile station having a high bandwidth requirement, the mobile station is preferentially granted system resources, as compared to another mobile station requesting call admission and having a lower bandwidth requirement, by being assigned a plurality of time slots per frame for forming one radio information block, and is operated with a coding technique that employs an iterative decoding technique."

As claim 1 explicitly recites, system resources are granted to the mobile station based at least in part on a bandwidth requirement of the mobile station. Wherein, **a mobile station having a high bandwidth requirement** is preferentially granted system resources **as compared to another mobile station** requesting call admission and **having a lower bandwidth requirement**.

As cited by the Examiner, Patel actually discloses:

> "The different levels of QoS subscriptions are used to allocate resources. With such selection criterion for the delivery mechanism, link performance for the mobile user is proportional to its QoS subscription. **A mobile user subscribing to a higher QoS and desiring a high quality link (i.e., premium users) will be assigned a larger share of the available resources. Mobile users requiring lower QoS (i.e., best effort users) will be assigned only minimal resources**," (emphasis added), (col. 14, lines 16-23); and
>
> "In the illustrated embodiment, mobile user 560 is a premium subscriber, mobile unit 570 is an assured subscriber, and mobile unit 580 is a best effort subscriber. **All three mobile units require 1 unit of bandwidth**. However, as server 556 has only 1 unit of bandwidth available, **depending on which mobile unit requests first, server 556 may allocate the resource to mobile unit 580**, even though mobile unit 580 is only a best effort subscriber. Furthermore, mobile units 560 and 570, who have subscribed to higher levels of services will be allocated less resources," (emphasis added), (col. 14, lines 24-33).

First, the Applicants note that as cited by the Examiner it is clearly disclosed **in both** the specification and in Figure 11 of Patel that apparently **all the mobile users 560, 570, and 580 equally require 1 unit of bandwidth**. Further, the Applicants note that this portion of Patel as cited by the Examiner merely appears to introduce the concept of QoS (quality of service) subscriptions and then describe a shortfall of applying QoS subscriptions alone. Here, Patel

appears to disclose that even a mobile user subscribing to a higher QoS may not be allocated resources over even "best effort users" when remaining available bandwidth is allocated on a "first-come, first-serve basis," (col. 14, lines 6-9).

The Applicants contend that Patel can not be interpreted as disclosing or suggesting giving a preference to a first high bandwidth connection request over a second, lower bandwidth connection request **at least because** Patel, as cited, clearly discloses **in both** the specification and in Figure 11 that all the **mobile users 560, 570, and 580 each equally require 1 unit of bandwidth**.

Further, as cited Patel discloses:

> **By assigning biases based on the QoS subscription, mobile users are allocated resources in accordance to their subscription class**," (emphasis added), (col. 14, lines 34-36); and
>
> "Thus, **mobile units 560, 570, and 580 each receive resources in accordance with their QoS subscriptions**. That is, **mobile unit 560, a premium user**, receives a total of 3 units of bandwidth while **mobile user 580, a best effort user**, receives only 1 unit of bandwidth. Such an allocation will result in a fair distribution of resources, **wherein the user who has subscribed to a higher level of service is provided with more resources than a user who has subscribed to a lower level of service**," (emphasis added), (col. 14, lines 51-60).

Here, to address the shortfall of the prior art as stated above, Patel appears to disclose a method of "assigning biases based on the QoS subscription" of the mobile users. Patel describes categories of bias values as assigned to premium users, assured users, and best effort users, where the categories are assigned to mobile units 560, 570, and 580, (col. 14, lines 35-50). The result according to Patel is "Thus, **mobile units 560, 570, and 580** each receive resources **in accordance with their QoS subscriptions**."

The Applicants suggest that the Examiner appears to have improperly equated **assigned** "biases values" as cited in Patel with a "bandwidth requirement" as in claim 1. Patel discloses:

> "The bias values may be determined based on the geographic location (geo-location) of the mobile units, air congestion on the network, QoS subscriptions, link performance data, or any suitable combination of the above. This dynamic resource allocation for data/IP packet delivery over an air interface improves system capacity and allows for differentiated service provisions among mobile users," (col. 2, lines 59-62).

As stated in Patel the bias values are determined based on any suitable combination of geographic location, air congestion, QoS subscriptions, and link performance data. None of these is based on the mobile's bandwidth requirement as in claim 1. QoS and link performance relate to the link, and are unchanged whether a mobile has a high or low bandwidth requirement; air link quality and volume of data are not interdependent.

Further, air congestion relates to bandwidth available, not the bandwidth requirement of a mobile station. But where there is congestion, Patel allocates available bandwidth on the basis of subscriber class, which is clearly independent of a mobile's bandwidth requirement that may change moment to moment. Geographic location is clearly irrelevant to bandwidth requirement.

The Applicants contend that, for at least the reasons stated, Patel clearly can not be seen to disclose or suggest wherein a mobile station at the edge of a cell that has a **high bandwidth requirement** is preferentially granted system resources as compared to another mobile station having a **lower bandwidth requirement** as in claim 1.

Furthermore, regarding the rejection of claim 1 the Examiner admits:

> **Patel however fails to expressly disclose a method where a mobile station, with a higher bandwidth requirement, requesting call admission is assigned a plurality of time slots per frame while a mobile station, with a lower bandwidth requirement, requesting call admission is assigned a single time slot.**" (emphasis added).

The Applicant notes that the applicable portion of claim 1 actually recites:

> "receiving a call admission request from a mobile station at the edge of a cell; and granting system resources to the mobile station based at least in part on a bandwidth requirement of the mobile station, wherein for a mobile station having a high bandwidth requirement, the mobile station is preferentially granted system resources, as compared to another mobile station requesting call admission and having a lower bandwidth requirement, **by being assigned a plurality of time slots per frame for forming one radio information block**"

The Examiner further states:

> "Kondo teaches an efficient method of time slot allocation for a communication in a TDMA communication system, which allocates one or more time slots in a TDMA frame. Kondo discloses a method where a mobile station, with a higher bandwidth requirement, requesting call admission is assigned a plurality of time slots per frame while a mobile station, with a lower bandwidth requirement, requesting call admission is assigned a single time slot. (See Column 3:34-55 and Column 6:25-45 and See Figure 5, steps 510 and 512)"

The Applicants respectfully disagree with the Examiner.

According to the teachings of Kondo, the allocation of time slots to a new call is made independent of any other new call, let alone one requesting call admission.

Kondo discloses:

> "**When the new call request is the low transmission speed communication, <u>one time slot is released from the high transmission speed communication</u>** using a maximum number of time slots (steps 509 and 510), and this one time slot is allocated to the new call request (step 511)," (emphasis added) (col. 7, lines 39-43).

Here Kondo appears to disclose **releasing a time slot from a high transmission speed communication so as to allocate the slot <u>to a low transmission speed communication</u>** during a new call request. For at least these reasons Kondo is not seen to address a shortfall of Patel as stated above.

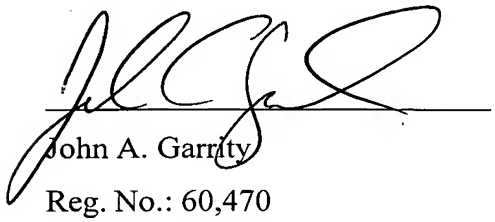
Furthermore, for at least the reasons stated the Applicants contend that the references cited, individually or combined, can not be seen to disclose or suggest claim 1.

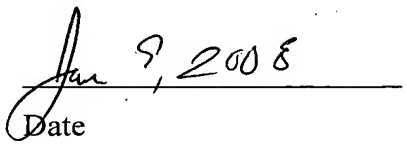
The Applicants contend the combination of the references cited, although such a combination is neither suggested nor deemed appropriate, does not teach preferentially granting system resources, as compared to another mobile station requesting call admission and having a lower bandwidth requirement as claimed. For this reason alone, claim 1 is seen to be in a condition for allowance. Further, independent claims 7, 14, 18, 21, 29, and 31 recite language similar to claim 1, for the reasons discussed above, claims 7, 14, 18, 21, 29, and 31 are likewise in condition for allowance.

In addition, for at least the reason that the claims 2-6, 8-13, 15-17, 19-20, 22-28, and 30 depend from claims 1, 7, 14, 18, 21, and 29 respectively, all the claims 1-31 should be allowed.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record. Should any unresolved issue remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

Respectfully submitted:





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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. BOX 1450, Alexandria, VA 22313-1450.

Jan. 9, 2007 — Date

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